Leafy Spurge

***Euphorbia esula* L.**

DESCRIPTION: Leafy spurge is an erect, branching, perennial herb 2 to 3½ feet tall, with smooth stems and showy yellow flower bracts. Stems frequently occur in clusters from a vertical root that can extend many feet underground. The leaves are small, oval to lance-shaped, somewhat frosted and slightly wavy along the margin. The flowers are very small and are borne in greenish-yellow structures surrounded by yellow bracts.

ECOLOGICAL THREAT: Leafy spurge displaces native vegetation in prairie habitats and fields through shading and by usurping available water and nutrients and through plant toxins that prevent the growth of other plants underneath it. Leafy spurge is an aggressive invader and, once presents, can completely overtake large areas of open land.

DISTRIBUTION IN THE UNITED STATES: Leafy spurge occurs across much of the northern U.S., with the most extensive infestations reported for Montana, North Dakota, Nebraska, South Dakota, and Wyoming. It has been identified as a serious pest on a number of national parks and on preserves of The Nature Conservancy in eleven northern states.

HABITAT IN THE UNITED STATES: Leafy spurge tolerates moist to dry soil conditions but is most aggressive under dry conditions where competition from native plants is reduced. It is capable of invading disturbed sites, including prairies, savannas, pastures, abandoned fields and roadside areas.

BIOLOGY & SPREAD: Leafy spurge reproduces readily by seeds that have a high germination rate and may remain viable in the soil for at least seven years, enhancing its chances of recovery over time. Its seed capsules open explosively, dispersing seed up to 15 feet from the parent plant and may be carried further by water and wildlife. Leafy spurge also spreads vegetatively at a rate of several feet per year. The root system is complex, can reach 15 or more feet into the ground, and may have numerous buds.

CURRENT MANAGEMENT APPROACHES: Because of its persistent nature and ability to regenerate from small pieces of root, leafy spurge is extremely difficult to eradicate. **Biological control** offers a highly promising management tactic for leafy spurge. The U.S. Department of Agriculture has shown success using six natural enemies of leafy spurge imported from Europe. These include a stem and root-boring beetle (*Oberea erythrocephala*), four root-mining flea beetles (*Aphthona* spp.) and a shoot-tip gall midge (*Spurgia esulae*). Large scale field-rearing and release programs are carried out cooperatively by federal and State officials in many northern states. The results are not as immediate as when herbicides are used but, if pesticide use is kept to a minimum, large numbers of these agents build up within a few years and have shown impressive results.

Several systemic herbicides have been found to be effective if applied in June, when the flowers and seeds are developing, or in early to mid-September, when the plants are moving nutrients downward into the roots. Prescribed burning, in conjunction with herbicides, may also be effective.

Leafy Spurge Plants

A single plant

Flowers

Fruit

Reference: www.nps.gov